REMARKS

Claims 22-26 and 33-44 are presented for further examination. Claims 22-26 have been amended. Claims 33-44 are new.

In the Office Action mailed July 7, 2010, the Examiner rejected claims 22, 23, and 25 as obvious over previously cited Wiss in view of newly cited U.S. Patent Publication No. 2002/0159539 ("Alcock"), and further in view of newly cited U.S. Patent Publication No. 2003/0095525 ("Petre et al."). Claim 24 was rejected as obvious over Wiss, Alcock, and Petre et al. and further in view of previously cited Richards et al. Claim 26 was found to be allowable if rewritten into independent form.

Applicant respectfully requests reconsideration and further examination of the claims.

Claim Rejections

Claim 22 has been amended to recite, *inter alia*, the first circuit adapted to generate as an output a ratio between a cross correlation of the I and Q components and a mean value of a square of the I component. In remarks accompanying the rejection, the Examiner states that Alcock teaches a first circuit adapted to generate as an output a ratio of a product of compensated I and Q components and the square of the compensated I component. In the remarks the Examiner stated that he interpreted broadly, as a ratio of Q and I, "the ratio of product of I and Q and square of I component as a ratio of Q and I." The Examiner also stated the amplitude of the signal is given by the magnitude of the vector, and the phase is given by the arc tangent of the ratio of the signals in the Q (real) and I (imaginary) channels.

Applicant respectfully disagrees. The Examiner says that Alcock's description of computing "a ratio of Q and I" is the same thing as the claimed computing "a ratio of the product of I and Q and square of I." This does not make sense mathematically or in the context of the claimed receiver circuit. The Examiner also says that it would be obvious to use Petre's "QPSK modulated signal with complex scrambling code" in the circuit of Wiss. However, Wiss does not address this in his description. In fact, Wiss states that his "… invention provides a fully

digital, non-linear adaptive rebalancer which requires no tone insertion, and is independent of the modulation employed by the system … ."

Nevertheless, to clarify the claimed circuit, applicant has amended claim 22 to recite the output of the first circuit as being a ratio between a cross correlation of the I and Q components and a mean value of a square of the I component. None of Wiss, Alcock, or Petre, taken alone or in any combination thereof, teach or suggest the combination recited in claim 22. Applicant respectfully submits that claim 22 is allowable over these references.

Dependent claims 23-25 are also allowable for the features recited therein as well as for the reasons why claim 22 is allowable.

Claim 26, which was found to be allowable, has been rewritten into independent form to incorporate the limitations of independent claim 22. Thus, claim 26 is now in condition for allowance.

New dependent claims 33-35, which depend from claim 26, are in essence dependent claims 23-25 rewritten to depend from claim 26. Applicant respectfully submits that these claims are allowable for the features recited therein as well as for the reasons why claim 26 is allowable.

Independent claim 36 is directed to a circuit that includes a QPSK modulation circuit and a first circuit coupled to the QPSK modulation circuit, the first circuit having a first multiplier structured to receive I and Q components of an incoming I/Q modulated signal and a second multiplier structured to receive the I component, and a divider structured to divide an output of the first multiplier by an output of the second multiplier, the first circuit structured to generate as an output a ratio between a cross correlation of the I and Q components and a mean value of a square of the I component.

Claim 36 includes a combination of the first and second components of claim 22 with the more detailed recitation of allowable dependent claim 26 with respect to the first circuit. Applicant respectfully submits that claim 36 is allowable for the reasons why dependent claim 26 was found to be allowable.

Dependent claims 37-44 are allowable for the features recited therein as well as for the reasons why their common independent claim is allowable. For example, claim 37

includes the second circuit structured to receive an integration signal from the divider circuit in the first circuit and uncompensated I and Q components of the incoming I/Q modulated signal, and to output on an output terminal of the circuit compensated I and Q components. Claim 37 thus adds the third element of independent claim 22 into claim 36. Dependent claims 38-40 are in essence dependent claims 23-25.

Dependent claim 41 is directed to an unclaimed feature of the first claim set, which is a third circuit having a multiplier structured to receive the Q component and a divider circuit structured to receive an output of the second multiplier of the first circuit and an output of the multiplier of the third circuit. Claim 41 further recites the third circuit structured to generate as an output a ratio between an output of the second multiplier of the first circuit and the output of the multiplier of the third circuit. Applicant respectfully submits that claim 41 is allowable. Dependent claims 42-44 are in essence the same as dependent claims 38-40, which are based on dependent claims 23-25.

In view of the foregoing, applicant respectfully submits that the all of the claims in this application are in condition for allowance. In the event the Examiner disagrees or finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact the undersigned by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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